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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,455	04/12/2004	James D. Cook	MTEZ 2 00035-1	2908

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FAY SHARPE LLP  
1100 SUPERIOR AVENUE, SEVENTH FLOOR  
CLEVELAND, OH 44114

EXAMINER
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SINGH, SUNIL

ART UNIT	PAPER NUMBER
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3673

MAIL DATE	DELIVERY MODE
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08/24/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/822,455

Applicant(s)

COOK, JAMES D.

Examiner

Sunil Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 33, 43, 46, 49, 50, 53-55, 57-64, 67, 68 and 70-78 is/are pending in the application.
- 4a) Of the above claim(s) 59-64, 72 and 77 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 33, 43, 46, 49, 50, 53-55, 57, 58, 67, 68, 70, 71, 73-76 and 78 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 33,43,46,49,53-55, 57-58, 67-68, 70,71,73-76,78 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 33 calls for the support device to move axially toward the expansion member without having the first end of the shell engaging and anchoring in the bore hole. However, the originally filed disclosure never provides any basis for such assertion and thus such language is considered new matter. Claim 54 calls for "only a single split"; however the originally filed disclosure never stated that the base ring had only a single split; therefore such language is considered new matter. Claim 55 calls for the base ring to be radially thickened and that it has a weakened area that splits an otherwise circumferentially continuous structure; however the originally filed disclosure never stated such language; therefore such language is considered new matter.

Claim 43 calls for the opposite end not to engage with said rock formation during any and all axial movement that tensions the roof bolt; however the originally filed disclosure never provide any basis for such assertion and thus such language is

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considered new matter. Claim 46 calls for the expansion shell to ride up and over said support member without anchoring to said rock. However, the originally filed disclosure never provides any basis for such assertion and thus such language is considered new matter. Claim 49 calls for one end of the shell incapable of anchoring to said bore hole; however, the originally filed disclosure never provided any basis for such assertion and thus such language is considered new matter. Claim 78 calls for the base ring to have a larger diameter than an adjacent portion of the shell; however, the originally filed disclosure fail to provide such basis and thus such language constitute new matter.

### ***Drawings***

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the resin called for in claim 75 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

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consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 33,53, 73,74,43 ,46, 67, 68,75, 76,49, 71 are rejected under 35 U.S.C. 102(b) as being anticipated by Ernst et al. (US 5816759).

Ernst et al. discloses a bolt and anchor assembly comprising an elongated bolt (20,22), a shell (30), expansion member (40), a support device (shell support) (29), engagement between said support device and said shell sequentially forces said shell into said expansion member to expand said shell to anchor said elongated in said associated bore hole (see col. 4 line 60+, col. 5 lines 1-16, col. 7 lines 1-10) and then allows axial movement of said support device in a direction toward and relative to said shell (see abstract, col. 4 lines 10-50, col. 7 line 5+). Base ring (32,33), fingers (35). Tapered

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surfaces (28,23, see Fig. 4) for both the support device and shell. Notch/split (36).

Resin (see Figure 4).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 50,70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ernst et al..

Ernst et al. discloses the invention substantially as claimed. However, Ernst et al. is silent about the support device being threadedly received on the bolt. The examiner takes official notice that support device being threadedly received on a bolt is old and well known. It would have been considered obvious to one of ordinary skill in the art to modify Ernst et al. by making the support device threadedly received on the bolt since such modification is well known and old and since this facilitate the installment of the support device. It should be noted that Ernst et al. suggest for support (29) to be integral with the bolt and/or separate (see col. 3). Therefore, it would have been considered obvious to one of ordinary skill in the art to modify Ernst et al. to have a threaded support since it is obvious to choose from a finite number of identified, predictable solutions, with a reasonable expectation of success. Such a modification facilitates installation.

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8. Claims 54,55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ernst et al..

Ernst et al. discloses the invention substantially as claimed. However, Ernst et al. is silent about having only a single split on the base ring. As suggested by Ernst et al. the base ring can have various numbers of split(s) (see col. 4 line 15+). Therefore, it would have been considered obvious to one of ordinary skill in the art to modify Ernst et al. to have only a single split on the base ring since it is obvious to try varying a result effective variable. Such a modification controls the sequential finger expansion.

9. Claim 78 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ernst et al..

Ernst et al. discloses the inventions substantially as claimed. However, Ernst et al. is silent about the fingers include gripping teeth. The examiner takes official notice that bolt and anchor assembly have fingers that include gripping teeth. It would have been considered obvious to one of ordinary skill in the art to modify Ernst et al. to include gripping teeth in order to more securely anchor the device.

### ***Response to Arguments***

10. Applicant's arguments filed 11/1/06 have been fully considered but they are not persuasive. Regarding claim 33, applicant argues that the shell (fingers) expand and only after the bolt is anchored then the support moves towards the expansion member without the first end of the shell engaging and anchoring in the borehole. It should be noted that applicant is relying on the structure of the borehole for patentability of the bolt

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and anchor assembly. For example, if the borehole is tapered meaning the borehole near member (40) is narrower than the borehole near member (29), and once the bolt begins to tighten member (34) engages the borehole and is anchored before member (32) is spread apart and if the borehole were tapered then the shell member (32) would not engage it. It is clear that member (29) remains fixed relative to sleeve (33) while member (34) is expanded to some degree (and depending on the borehole since this can mean it is anchored therein) otherwise, Ernst would state that members (34 and 32) expand simultaneously. Secondly, applicant fail to recognize that the sequentially expansion is not only limited to the fingers on one end being longer than the other but also that the chamfer surface (28) controls the sequential expansion. With regards to claims 54,55, the argument is moot since there is a new ground of rejection. With regards to claim 59, there is no need for a response here since claim 59 is directed to a non-elected Specie.

With regards to claims 73,74 applicant argues that the straight portion of the support never engages the base. The examiner disagrees. See Figure 4, the straight portion of the support engages the base.

Regarding claim 43, applicant argues that the shell have fingers only at one end while Ernst et al. have fingers at both ends. The examiner disagrees. The examiner has construed member (32) of Ernst et al. as base member and not fingers. Applicant argues that the shell (fingers) at one end is anchored while the first end of the shell does not engage and anchor in the borehole. It should be noted that applicant is relying on the structure of the borehole for patentability of the bolt and anchor assembly. For



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example, if the borehole is tapered meaning the borehole near member (40) is narrower than the borehole near member (29), and once the bolt begins to tighten member (34) engages the borehole and is anchored before member (32) is spread apart and if the borehole were tapered then the shell member (32) would not engage it. With regards to claim 70, applicant argues that it is not obvious to have a threaded support. The examiner disagrees. It should be noted that Ernst et al. suggest for support (29) to be integral with the bolt and/or separate (see col. 3). Therefore, it would have been considered obvious to one of ordinary skill in the art to modify Ernst et al. to have a threaded support since it is obvious to choose from a finite number of identified, predictable solutions, with a reasonable expectation of success. Such a modification facilitates installation. With regards to claim 46, applicant argues that Ernst et al. fails to teach tension of the bolt. The examiner disagrees. See col. 2 line 45+, wherein Ernst et al. teaches to tension the bolt. Applicant's argument that all the fingers (34) do not engage the borehole is mere conjecture and not supported by any facts. Since the structure is symmetric, when member (40) moves the all the fingers (34) would expand equally into engagement with the borehole.

With regards to claim 49, applicant argues that the first end of the shell is incapable of engaging and anchoring in the borehole. It should be noted that applicant is relying on the structure of the borehole for patentability of the bolt and anchor assembly. For example, if the borehole is tapered meaning the borehole near member (40) is narrower than the borehole near member (29), and once the bolt begins to tighten member (34) engages the borehole and is anchored before member (32) is

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spread apart and if the borehole were tapered then the shell member (32) would not engage it.

***Allowable Subject Matter***

11. Claims 57,58 would be allowable if rewritten to over the rejection(s) under 35 U.S.C. 112, 1st paragraph, set forth in this Office action and rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

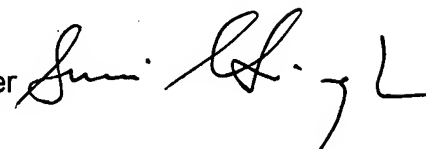
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sunil Singh whose telephone number is (571) 272-7051. The examiner can normally be reached on Monday through Friday 10:30 AM - 7:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Engle Patricia can be reached on (571) 272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sunil Singh  
Primary Examiner  
Art Unit 3673



SS

6/25/07